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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,225	06/30/2000	William C. Hunt	22977	8603
22267	7590	12/28/2005	EXAMINER	
CROWE AND DUNLEVY, P.C. 20 NORTH BROADWAY SUITE 1800 OKLAHOMA CITY, OK 73102-8273			BHAT, NINA NMN	
			ART UNIT	PAPER NUMBER
			1764	

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/607,225

Applicant(s)

HUNT ET AL.

Examiner

N. Bhat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10,11 and 19-22 is/are allowed.
- 6) ☒ Claim(s) 1-9 and 12-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Applicant's correction to the drawings is acknowledged by the examiner and has been approved by the examiner. Applicant's arguments and amendments have been fully and carefully considered. Applicant's amendment to claims 1 and 12 wherein the hydrologic controls are float control valves or eductors obviates the 112, 1<sup>st</sup> Paragraph enablement rejection. Accordingly the rejection is withdrawn. However, the rejection over Yates in combination with Scoville (applicant's assumption is correct, Collier is not part of the rejection) remains for reasons delineated in the office action of May 2, 2005.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-9 and 12-18 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Yates in combination with Scoville.

Yates discloses the invention substantially as claimed. Yates teaches a feed system for intermixing gaseous chlorine with a supply of water, the apparatus includes a

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housing which includes a chamber which receives a first reactant and a second reactant, which specifically includes a flow of water and a flow of gaseous chlorine, the chamber causes reaction and/or provides gas-liquid contact to provide a water and chlorine stream which can then be subsequently used. There are means for controlling the amount of water and chlorine into the chamber. The valving used to control or regulate the flow streams include pivotally mounted to the float operated valves. [Note the claims 1-2, and Column 9, lines 19-44 and Figure 6]

However, Yates does not specifically teach applicant's diluent inlet and diluent chamber and eductor.

Scoville teaches an apparatus which mixes a chlorine gas and sodium hydroxide to form a sodium hypochlorite solution which is then mixed or diluted with a saturated brine, the elements of the apparatus include a chamber or reactor which includes inlets for a first reactant, an inlet for a second reactant, and means for introducing a diluent which in this case a brine solution. The pumps and valves for transport of the saturated salt brine and soft water, piping, means for intermixing chlorine gas and sodium hydroxide used float valves and other valve devices which are used to regulate the system. [Note Figure 1, and column 2, lines 56-68-column 3, lines 1-42]

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an apparatus which includes a chamber or reactor to which a first and second reactor inlets, which is controlled for controlling the flow of the first and second reactants, this is notoriously well known and all reactors include means to control feed flow rates into the reactor, applicant has argued that the control is by

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hydrologic controls. Both Yates and Scoville teach using float valves, controls in moving the fluids into the reactor/chamber, within the reactor/chamber and mixing to produce a mixed stream which is then outputted from the reactor all of these streams are controlled within the system and although not specifically recited would meet applicant's function of hydrologically controlling the first and second reactants into the chamber. With respect to applicant's specific recitation of an eductor connected to the diluent inlet and reaction chamber, Scoville teaches a chamber which functions equivalently to a diluent chamber which mixes water with the chlorine and sodium hydroxide solution. Scoville teaches moving these fluids into and out of the chamber to use specifically an eductor to supply and move the fluids into and out of the respective chambers would have been obvious to one having ordinary skill in the art at the time the invention was made. With respect to using specific control means such as needle valves, for controlling a system using float valves because both Scoville and Yates teach using float valves in controlling the flow of fluids within the apparatus and the use of specifically a needle valve would have been an obvious expedient absent criticality in showing. It is maintained that Yates in combination with Scoville fairly suggests and teaches applicant's apparatus and method as claimed.

4. Applicant has argued that the chamber of Yates and tank of Scoville are different than applicant's reactor. This argument is not persuasive because there is little weight being placed on the term reactor, the chamber or tank of Yates is equivalent to applicant's reactor, the reactor is merely a vessel, there is reaction taking place both in applicant's reactor as well as in the chamber or housing (65) wherein water is supplied

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to the interior of the housing by way of flow line (30) in or to maintain a desired water level regulated by a float control assembly. The hydrogen and chlorine gases will be supplied to the chamber and is admixed with the water and flow out of the housing 65 by flow conduit 32. This apparatus as delineated in Figure 6 and described in Column 9, line 18 et seq. provides a chemical generator this is the chlorine generator which electrolytic generated chlorine and hydrogen gas within an electrolytic cell, a first reaction inlet is provided, a second reactant inlet is provided, the chamber which is chamber (65) as described in Yates and the amount of fluid within the chamber (65) is controlled with hydrologic controls or using a float assembly. Although this is not called a "reactor" is reads on applicant's elements of claim 1. Similarly regarding applicant's arguments with respect to the Scoville reference, that tank (14) is not a reaction chamber, this is not how the office is instructing examiner's including Primary examiner's to interpret the claims. Because there is reaction-taking place in the vessel or tank of Scoville, the examiner has met the burden of providing a reactor, which can be any vessel where a reaction takes place. In the response to applicant's argument that reactor, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The examiner contends that the housing of Yates and the tank of Scoville would read on applicant's chemical generator, which includes a reaction chamber. In response to applicant's arguments against the references individually, one cannot show nonobviousness by

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attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). It is maintained that when giving the claims its broadest most reasonable interpretation, Yates '272 and Scoville renders applicant's chemical generator as a whole obvious to one having ordinary skill in the art at the time the invention was made.

5. Claims 10-11 and 19-22 are free of the prior art and are allowable.
6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Bhat whose telephone number is 571-272-1397. The examiner can normally be reached on Monday-Friday, 9:30AM-6:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'N. Bhat', with a stylized flourish extending from the end.

N. Bhat  
Primary Examiner  
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